

Properties of Real Numbers

The real number system is an example of a mathematical structure called a *field*.

Some of the properties of a field are summarized in the table below:

Real Number Properties		
For any real numbers a , b , and c .		
Property	Addition	Multiplication
Commutative	$a + b = b + a$	$ab = ba$
Associative	$(a + b) + c = a + (b + c)$	$(ab)c = a(bc)$
Identity	$a + 0 = a$	$a \cdot 1 = a$
Inverse	$a + (-a) = 0$	$a \cdot \frac{1}{a} = 1$
Distributive	$a(b + c) = ab + ac$	

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